

body plac'd in that posture. The leggs were all much of the same make, being all of them cover'd with a strong hairy scale or shel, just like the legs of a Crabb or Lobster, and the contrivance of the joints seem'd much the same; each legg seem'd made up of eight parts, 1, 2, 3, 4, 5, 6, 7, 8, to the eighth or last of which, grew the soles and claws, described before in the 38. *Observation*.

Out of the upper part of this trunk grew the two wings, which I mention'd in the 38. *Observation*, consisting of a film, extended on certain small stiff wires or bones: these in a blue Fly, were much longer than the body, but in other kind of Flies they are of very differing proportions to the body. These films, in many Flies, were so thin, that, like several other plated bodies (mention'd in the ninth *Observation*) they afforded all varieties of fantastical or transient colours (the reason of which I have here endeavour'd to explain) they seem'd to receive their nourishment from the stalks or wires, which seem'd to be hollow, and neer the upper part of the wing LL several of them seem'd jointed, the shape of which will sufficiently appear by the black lines in the second Figure of the 26. *Scheme*, which is a delineation of one of those wings expanded directly to the eyes.

All the hinder part of its body is cover'd with a most curious blue shining armour, looking exactly like a polish'd piece of steel brought to that blue colour by annealing, all which armour is very thick bestuck with abundance of tapering bristles, such as grow on its back, as is visible enough by the Figure.

Nor was the inside of this creature less beautifull than its outside, for cutting off a part of the belly, and then viewing it, to see if I could discover any Vessels, such as are to be found in a greater Animals, and even in Snails exceeding manifestly, I found, much beyond my expectation, that there were abundance of branchings of Milk-white vessels, no less curious than the branchings of veins and arteries in bigger terrestrial Animals, in one of which, I found two notable branches, joining their two main stocks, as it were, into one common *ductus*; now, to what veins or arteries these Vessels were *analogus*, whether to the *vena porta*, or the *meseraick vessels*, or the like, or indeed, whether they were veins and arteries, or *vasa lactea*, properly so called, I am not hitherto able to determine, having not yet made sufficient enquiry; but in all particulars, there seems not to be any thing less of curious contrivance in these Insects, than in those larger terrestrial Animals, for I had never seen any more curious branchings of Vessels, than those I observ'd in two or three of these Flies thus opened.

It is a creature active and nimble, so as there are very few creatures like it, whether bigger or smaller, in so much, that it will scape and avoid a small body, though coming on it exceeding swiftly, and if it sees any thing approaching it, which it fears, it presently squats down, as it were, that it may be the more ready for its rise.

Nor is it less hardy in the Winter, than active in the Summer, enduring all the Frosts, and surviving till the next Summer, notwithstanding the

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bitter cold of our Climate; nay, this creature will indure to be frozen, and yet not be destroy'd, for I have taken one of them out of the Snow whereon it has been frozen almost white, with the Ice about it, and yet by thawing it gently by the warmth of a fire, it has quickly reviv'd and flown about.

This kind of Fly seems by the steams or taste of fermenting and putrifying meat (which it often kisses, as 'twere, with its *proboscis* as it trips over it) to be stimulated or excited to eject its Eggs or Seed on it, perhaps, from the same reason as Dogs, Cats, and many other brute creatures are excited to their particular lusts, by the smell of their females, when by Nature prepared for generation; the males seeming by those kind of smells, or other incitations, to be as much necessitated thereto, as *Aqua Regis* strongly impregnated with a solution of Gold, is forced to precipitate it by the affusion of spirit of *Urine*, or a solution of *Salt of Tartar*.

One of these put in spirit of *Wine*, was very quickly seemingly kill'd, and both its eyes and mouth began to look very red, but upon the taking of it out, and suffering it to lie three or four hours, and heating it with the Sun beams cast through a Burning-glass, it again reviv'd, seeming, as it were, to have been all the intermediate time, but dead drunk, and after certain hours to grow fresh again and sober.

#### Observ. XLIII. Of the Water-Insect or Gnat.

THIS little creature, described in the first Figure of the 27. *Scheme*, was a small scaled or crufted Animal, which I have often observ'd to be generated in Rain-water; I have also observ'd it both in Pond and River-water. It is suppos'd by some, to deduce its first original from the putrification of Rain-water, in which, if it have stood any time open to the air, you shall seldom miss, all the Summer long, of store of them frisking too and fro.

'Tis a creature, wholly differing in shape from any I ever observ'd; nor is its motion less strange: It has a very large head, in proportion to its body, all covered with a shell, like other *testaceous* Animals, but it differs in this, that it has, up and down several parts of it, several tufts of hairs, or bristles, plac'd in the order express'd in the Figure; It has two horns, which seem'd almost like the horns of an Oxe, inverted, and, as neer as I could guess, were hollow, with tufts of bristles, likewise at the top; these horns they could move easily this or that way, and might, perchance, be their nostrils. It has a pretty large mouth, which seem'd contriv'd much like those of Crabs and Lobsters, by which, I have often observ'd them to feed on water, or some imperceptible nutritive substance in it.

I could perceive, through the transparent shell, while the Animal surviv'd, several motions in the head, thorax, and belly, very distinctly,

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